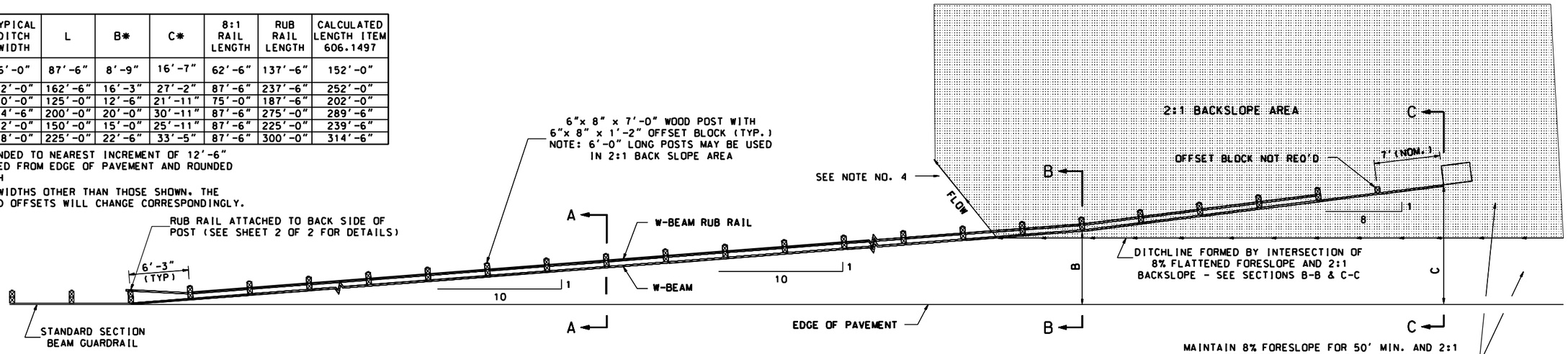
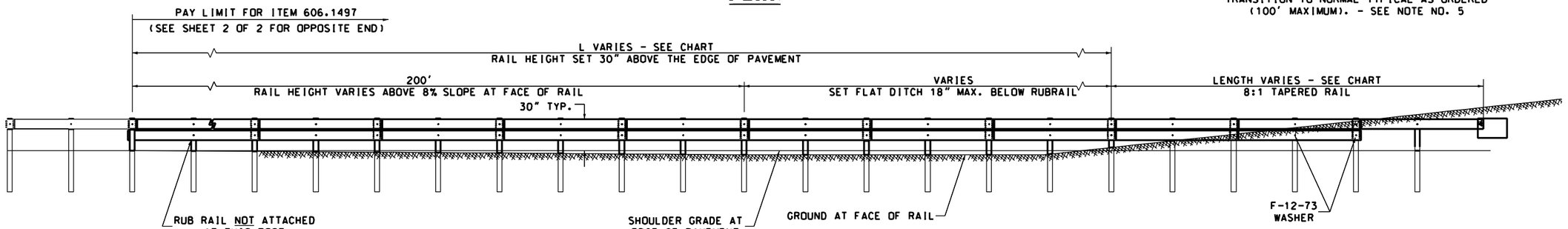
TYPICAL SECTION	TYPICAL DITCH WIDTH	L	B*	C*	8:1 RAIL LENGTH	RUB RAIL LENGTH	CALCULATED LENGTH ITEM 606.1497
11-4-4 (EARTH) 12-4-4 (EARTH)	6'-0"	87'-6"	8'-9"	16'-7"	62'-6"	137'-6"	152'-0"
12-10-10 (EARTH)	12'-0"	162'-6"	16'-3"	27'-2"	87'-6"	237'-6"	252'-0"
12-10-10 (ROCK)	10'-0"	125'-0"	12'-6"	21'-11"	75'-0"	187'-6"	202'-0"
12-10-12 (EARTH)	14'-6"	200'-0"	20'-0"	30'-11"	87'-6"	275'-0"	289'-6"
12-10-12 (ROCK)	12'-0"	150'-0"	15'-0"	25'-11"	87'-6"	225'-0"	239'-6"
12-10-12 (ROCK)	18'-0"	225'-0"	22'-6"	33'-5"	87'-6"	300'-0"	314'-6"

RAIL LENGTHS ROUNDED TO NEAREST INCREMENT OF 12'-6"
* OFFSETS MEASURED FROM EDGE OF PAVEMENT AND ROUNDED TO NEAREST INCH
NOTE: FOR DITCH WIDTHS OTHER THAN THOSE SHOWN, THE LENGTHS AND OFFSETS WILL CHANGE CORRESPONDINGLY.



PLAN

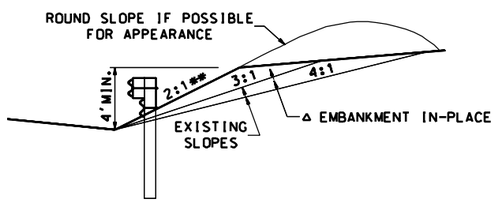


ELEVATION

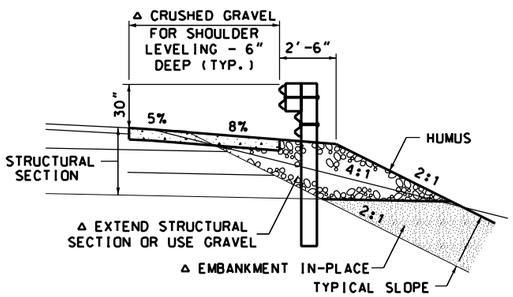
45 MPH - 10:1 TAPER RATE

TERMINAL SECTION TYPE E-2 MODIFIED

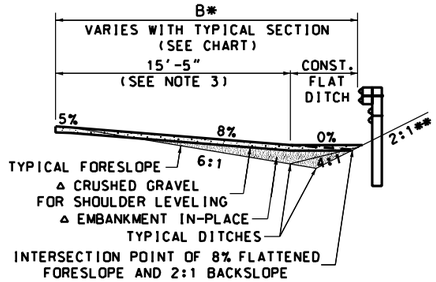
ITEM NO. 606.1497 - BEAM GUARDRAIL TERMINAL SECTION, TYPE E-2 MODIFIED
PAID: LINEAR FOOT (INCLUDES RUB RAIL AND ANCHOR)
USE: AT BEGINNING OR END OF STANDARD SECTION GUARDRAIL



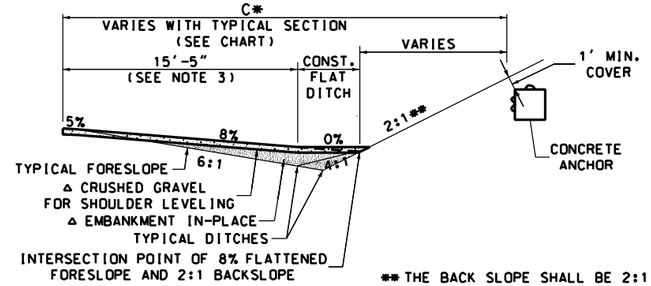
SLOPE STEEPENING DETAIL
(WHERE REQUIRED)



SECTION A-A



SECTION B-B



SECTION C-C

** THE BACK SLOPE SHALL BE 2:1 OR STEEPER APPROACHING THE ANCHOR. IT IS NOT THE INTENT TO FLATTEN AN EXISTING BACKSLOPE THAT IS STEEPER THAN 2:1 UNLESS SO NOTED ON THE PLANS OR PROPOSAL.

△ SEE NOTE 6 FOR ALL HATCHED AREAS

NOT TO SCALE

GENERAL NOTES

1. THIS TERMINAL IS DESIGNED FOR USE PRIMARILY AT SITES WHERE THE TERRAIN CHANGES ABRUPTLY FROM A CUT TO A STEEP FILL, AND WHERE THEORETICAL LENGTH OF NEED WOULD EXTEND INTO THE CUT SECTION FOR A CONSIDERABLE DISTANCE. THE DESIGN SPEED FOR THIS TERMINAL IS 45 MPH.
2. SEE SHEET 2 OF 2 FOR E-2 HARDWARE DETAILS. SEE STANDARDS NO. GR-1 OR GR-2 FOR ADDITIONAL DETAILS OF COMMON HARDWARE.
3. A RUB RAIL IS REQUIRED WHEN THE BOTTOM OF THE W-BEAM IS GREATER THAN 18" HIGH ABOVE THE GROUND. A MAXIMUM OFFSET FROM THE E.P. OF 15'-5" MAINTAINS A SINGLE RUB RAIL HEIGHT. FOR ANY PORTION OF A DITCH OFFSET GREATER THAN 15'-5" CONSTRUCT A FLAT BOTTOMED DITCH TO THE 2:1 BACK SLOPE.
4. CONSTRUCT OUTLET DITCH TO FIT SITE CONDITIONS OR USE DROP INLET AND PIPE IF LARGE FLOWS ARE ANTICIPATED OR IF DITCHLINE BECOMES FLATTER THAN 0.4% (PAY UNDER BID ITEMS).
5. FOR INSTALLATIONS IN ROCK CUT EARTH BERMS, EXCAVATE A SUFFICIENT QUANTITY OF ROCK TO PERMIT POST DRIVING, AND ANCHOR THE TERMINAL BY ONE OF THE FOLLOWING METHODS:
   A) EXCAVATE ROCK TO PERMIT INSTALLATION OF PRECAST ANCHOR
   B) CONSTRUCT CAST-IN-PLACE ANCHOR WITH SAME MASS AS PRECAST ANCHOR AND 4 S.F. CROSS-SECTIONAL AREA TO FACE OF ANCHOR (SUBSIDIARY TO ITEM 606.1497).
   C) ATTACH W-BEAM TERMINAL CONNECTOR DIRECTLY TO ROCK FACE BY AN APPROVED ROCK BOLT METHOD (SUBSIDIARY TO ITEM 606.1497).
6. ANY COMMON EXCAVATION, EMBANKMENT IN-PLACE, AND CRUSHED GRAVEL FOR SHOULDER LEVELING REQUIRED WILL BE PAID UNDER ITEM 203.5596 - GUARDRAIL E-2 PLATFORMS. ROCK EXCAVATION WILL BE PAID AS ITEM 206.2 - ROCK STRUCTURE EXCAVATION.

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION ◦ BUREAU OF HIGHWAY DESIGN

BEAM GUARDRAIL TERMINAL SECTION TYPE E-2 MODIFIED 45

REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
3-1-06	GR-E2MOD45			